



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/580,022	05/26/2000	Dwight Sunada	SUN-P5125	9975

22200 7590 05/06/2004

PARK, VAUGHAN & FLEMING LLP
702 MARSHALL STREET
SUITE 310
REDWOOD CITY, CA 94063

EXAMINER

YAO, KWANG BIN

ART UNIT	PAPER NUMBER
----------	--------------

2667

DATE MAILED: 05/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/580,022

Applicant(s)

SUNADA ET AL.

Examiner

Kwang B. Yao

Art Unit

2667

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 12-25 and 27-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The substitute specification filed 9/11/01 has not been entered because it does not conform to 37 CFR 1.125(b) and (c) because the followings are missing: 1) a statement that the substitute specification contains no new matter; 2) a marked-up copy showing the amendments to be made via the substitute specification relative to the specification at the time the substitute specification is filed.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who

Art Unit: 2667

has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-11 and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Varghese et al. (US 6,449,256).

Varghese et al. disclose a fast level four switching system comprising the following features: regarding claim 1, as depicted in Figs. 8, 9, a router (FORWARD TABLE ROUTER), comprising: a content addressable memory (FORWARDING TABLE) which stores Internet Protocol address prefixes in an order independent of lengths of the Internet Protocol address prefixes; and an encoder (PROCESSOR) coupled to the content addressable memory (FORWARDING TABLE) which stores a plurality of codes, corresponding to the Internet Protocol address prefixes in the content addressable memory, and compares the codes corresponding to matching Internet Protocol address prefixes to find a longest matching Internet Protocol address prefix (Fig. 14, 17, 19, 21, 22); regarding claim 2, a memory (FORWARDING TABLE) coupled to the encoder (PROCESSOR), the memory (FORWARDING TABLE) for storing (Figs. 11, 12, 13, 15) a port number corresponding to each Internet Protocol address prefix in the content addressable memory and other information for routing an incoming Internet Protocol packet; regarding claim 3, wherein the encoder (PROCESSOR) includes circuitry for

Art Unit: 2667

finding one of the plurality of codes; regarding claim 4, wherein the encoder (PROCESSOR) includes circuitry for deleting one of the plurality of codes (column 10, lines 53-56); regarding claim 5, wherein each of the plurality of codes indicates a number of relevant bits in the corresponding Internet Protocol address prefix (Figs. 11, 12, 13, 15); regarding claim 6, wherein among the codes corresponding to matching Internet Protocol address prefixes, a code indicating a highest number of relevant bits indicates the longest matching Internet Protocol address prefix (Fig. 14, 17, 19, 21, 22); regarding claim 7, wherein the code indicates up to 32 relevant bits in the corresponding Internet Protocol address prefix (Figs. 11, 12, 13, 15); regarding claim 8, wherein the code indicates up to 128 relevant bits in the corresponding Internet Protocol address prefix (Figs. 11, 12, 13, 15); regarding claim 9, storing Internet Protocol address prefixes in a content addressable memory (FORWARDING TABLE) in an order independent of lengths of the Internet Protocol address prefixes; and comparing (PROCESSOR) codes corresponding to matching (Fig. 14, 17, 19, 21, 22) Internet Protocol address prefixes in an encoder to find a longest matching Internet Protocol address prefix; regarding claim 10, wherein the codes indicate numbers of relevant bits in the corresponding Internet Protocol address prefixes (Figs. 11, 12, 13, 15); regarding claim 11, wherein among the codes corresponding to matching Internet Protocol address prefixes, the code indicating a highest number of relevant bits indicates the longest matching Internet Protocol address prefix (Fig. 14, 17, 19, 21, 22); regarding claim 26, receiving Internet Protocol address prefixes; generating (FORWARDING TABLE) codes corresponding to a number of relevant bits (Figs. 11, 12, 13, 15) in the Internet Protocol address prefix receiving a packet with a destination Internet Protocol address; comparing (PROCESSOR) the destination Internet Protocol address to the Internet Protocol address prefixes to find the Internet Protocol

Art Unit: 2667

address prefixes that match the destination Internet Protocol address (Fig. 14, 17, 19, 21, 22); comparing the codes corresponding to the matching Internet Protocol address prefixes to find a longest matching Internet Protocol address prefix; and sending the packet to a port corresponding to the longest matching Internet Protocol address prefix (Fig. 14, 17, 19, 21, 22). See column 9-19.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Furukawa et al. (US 6,711,623) discloses an integrated network.

Satoh et al. (US 6,625,662) discloses an inter-network connecting device.

Yazdani et al. (US 6,614,789) discloses a method for matching strings.

Satoh et al. (US 6,065,064) discloses an inter-network connecting device.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kwang B. Yao whose telephone number is 703-308-7583. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H Pham can be reached on 703-305-4378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2667

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KWANG BIN YAO
PRIMARY EXAMINER



Kwang B. Yao
April 30, 2004